

City of Milwaukee Cross Connection Program

Construction Trades Division
Cross Connection Section

Why is Milwaukee conducting Cross Connection Surveys?

- Safe Drinking Water Act (SDWA) passed by congress in 1974
- Department of Natural Resources:
NR 811.09
- Milwaukee Code of Ordinances:
Volume 1 97-12

Safe Drinking Water Act (SDWA)

- The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply.
- The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources, rivers, lakes, reservoirs, springs, and ground water wells.

Safe Drinking Water Act (SDWA)

- SDWA applies to every public water system in the United States.
- The responsibility for making sure these public water systems provide safe drinking water is divided among US EPA, states, tribes, water systems, and the public.

Department of Natural Resources

NR 811.09

Cross-connections and interconnections

- CROSS-CONNECTION CONTROL PROGRAM.
- The supplier of water for every municipal water system shall develop and implement a comprehensive control program for the elimination of all existing cross-connections and prevention of all future cross-connections.

Milwaukee Code of Ordinances 97-12

Cross-Connection Control Regulations

- 97-12-1. PURPOSE. The purpose of this section is to protect consumers and public water supply system of the city from the possibility of contamination or pollution due to a backflow of contaminants into building plumbing and/or into the public water supply system.

Memorandum of Understanding

- The Department of Neighborhood Services through a Memorandum of Understanding established a Cross Connection Control Program for the Milwaukee Water Works.
- The program began in 2005 to conduct inspections of commercial buildings on a ten year periodic cycle.

What is a Cross Connection?

- To help better understand Backflow Prevention & Cross Connection Control we will now show a 14 minute video prepared by the American Water Works Association addressing this concern.

Cross Connection Control Program

- Approximately 15,800 commercial water accounts serve buildings in Milwaukee.
- Six Plumbing Inspectors will be conducting the inspections under this program.
- The Plumbing Inspectors developed a reference manual identifying the various types of cross connection configurations and the proper cross connection control devices to correct them.

Cross Connection Survey

What to Expect

- Most inspections are initiated as a cold call.
- A visual inspection of all exposed water supply piping from the water meter to the point of use.
- Identification all cross connections observed during the visual inspection.
- A review of all existing testable assemblies and their required annual inspection and test reports.

Inspection Results

- If no cross connections are observed the inspection is recorded as passed.
- If cross connections are observed the Department of Neighborhood Services will send an Inspection Report and Order to Correct Conditions.
- The property will be recorded as failed until the corrections have been made and re-inspected.

Typical Cross Connections

- Apartments
 - Laundry Tub Faucets
 - Hose Faucets
 - Boilers

Typical Cross Connections

- Office Buildings
 - Boilers
 - Chillers
 - Soap Dispensers
 - Water Closets
 - Coffee Makers

Typical Cross Connections

- Restaurants
 - Beverage Dispensers
 - Food Grinders
 - Steamer
 - Dishwasher
 - Glass Washer
 - Soap Dispenser
 - Hose and Spray

Typical Cross Connections

- Manufacturing Plants
 - Chemical Dispensers
 - Cooling Towers
 - Boilers
 - Hose Faucets
 - Equipment using Potable Water

Hose Bibb



Janitors Faucet



Laundry Tub Faucets



Hose Bibbs – Medical Whirlpool



Hose and Spray



Hose and Spray



Fill Valve



Backflow Preventer



Boilers



Electric Boiler



Cooling Towers



Coffee Makers



Carbonator



Carbonator



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Soap Dispenser



Commercial Dishwasher



Parts Washer



Chemical Dispenser



Time Frame for Corrections

- The typical Inspection Report and Order to Correct Conditions will provide 30 days to correct.
- For more unusual cross connection conditions a longer time for compliance may be specified.
- Appeals for additional time to comply are made to the Standards and Appeals Commission.

Correcting Cross Connections

- Hose thread vacuum breakers may be installed without a permit by anyone.
- A licensed plumber working under a permit is required for any other form of cross connection correction.

Order Compliance

- Call for re-inspection by owner or plumbing contractor.
- Re-inspection of cross connection violations.
- An abated status is provided on the Inspection Report and Order to Correct Conditions if all items are addressed.
- The property status is changed from failed to passed.

See You in Ten Years

- We have a display table with examples of cross connection control devices and a copy of the reference manual.
- We will take questions at this time.